

13C. Maintenance

Regulations: 180 NAC 4-004, 180 NAC 3-016.02.

Criteria: *Licensees must routinely clean and maintain gauges according to the manufacturer's recommendations and instructions. For gauges with a source rod, radiation safety procedures for routine cleaning and lubrication of the source rod and shutter mechanism (e.g., to remove caked dirt, mud, asphalt, or residues from the source rod; lubricate the shutter mechanism) must consider ALARA and ensure that the gauge functions as designed and source integrity is not compromised.*

Non-routine maintenance or repair (beyond routine cleaning and lubrication) that involves detaching the source or source rod from the device and any other activities during which personnel could receive radiation doses exceeding Agency limits must be performed by the gauge manufacturer or a person specifically authorized by the Agency, the U.S. Nuclear Regulatory Commission or other Agreement State. Requests for specific authorization to perform non-routine maintenance such as detachment of the source or source rod from the device or repair (see Appendix J) must demonstrate that personnel performing the work do the following:

- *Have adequate training and experience;*
- *Use equipment and procedures that ensure compliance with regulatory requirements, and consider ALARA; and*
- *Ensure that the gauge functions as designed and that source integrity is not compromised.*

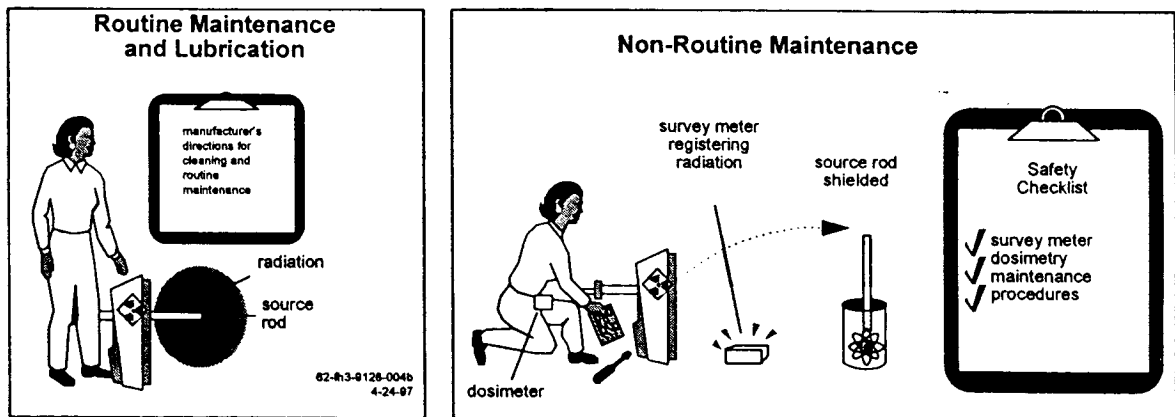


Figure 4 Maintenance. All licensees need to perform routine cleaning and lubrication to ensure proper operation of the gauge. For non-routine maintenance, most licensees rely on the gauge manufacturer or other service companies.

Generally, the Agency permits portable gauge **licensees** to perform routine maintenance of the gauges provided that they follow the gauge manufacturer's recommendations and instructions. Although manufacturers may use different terms, "routine maintenance" includes, but is not limited to, cleaning, lubrication, changing batteries or fuses, repairing or replacing a handle.

Routine maintenance does NOT include any activities that require removing the sealed source or source rod from the gauge.

The Agency license will state that any cleaning, maintenance, or repair of gauges that requires detaching the source or source rod from the gauge shall be performed only by the manufacturer or other persons specifically licensed by the Agency, the U.S. Nuclear Regulatory Commission or other Agreement State to perform such services. Most licensees do not perform non-routine maintenance or repair operations that require detaching the source or source rod from the gauge; they usually return the gauge to the manufacturer.

Response from applicant:

Routine cleaning and lubrication: Submit either of the following:

- "We will implement and maintain procedures for routine maintenance of our gauges according to each manufacturer's recommendations and instructions."
- Or**
- Alternative procedures for the Agency's review see Appendix J for the criteria to be used.

Non-routine maintenance or repair operations that require detaching the source or source rod from the gauge: Submit either of the following:

- "We will send the gauge to the manufacturer or other person authorized by the Agency, the U.S. Nuclear Regulatory Commission or other Agreement State to perform non-routine maintenance or repair operations that require detaching the source or source rod from the gauge."
- Or**
- "We will provide needed information to support request to perform non-routine maintenance per Appendix J of Regulatory Guide 3.4 "Radioactive material Guidance for Portable Gauges and X-ray Fluorescence Analyzers." **And** Submit non-routine maintenance procedures for the Agency's review. See Appendix J for the criteria to be used.